

Notice of Allowability

Application No.

10/731,803

Examiner

Juan A. Torres

Applicant(s)

CHANG ET AL.

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment After Final filed on 08/16/2006.
2. ☒ The allowed claim(s) is/are 1-34.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/16/2006 has been entered.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Bruce E. Garlick on 10/23/2006.

The application has been amended as follows: in the specification on page 10 line 8, the recitation "Hands Fee I/F 338" is changed to "Hands Free I/F 338"

Allowable Subject Matter

Claims 1-34 are allowed.

The following is an examiner's statement of reasons for allowance: claims 1-34 are allowed because the references cited fail to teach, as applicant has, a system for implementing Incremental Redundancy (IR) operations in a wireless receiver,

comprising a baseband processor that is operable to receive analog signals corresponding to a data block and to sample the analog signal to produce samples corresponding to the data block, an equalizer that is operable to receive the samples from the baseband processor, to equalize the samples, and to produce soft decision bits of the data block, the baseband processor and equalizer together operable to perform a substantial portion of Physical (PHY) layer operations of the system, a system processor that is operable to execute a substantial portion of Media Access Control (MAC) layer operations of the system to receive the soft decision bits of the data block from the equalizer, to, prior to executing all MAC layer operations on the soft decision bits, investigate whether IR operations are required for the soft decision bits of the data block, and to initiate IR operations based upon the investigation, and an IR processing module operably coupled to the system processor that is operable to receive the soft decision bits of the data block, to receive a direction from the system processor to perform IR operations on the soft decision bits of the data block, and to perform IR operations on the soft decision bits of the data block; a system for implementing Incremental Redundancy (IR) operations in a wireless receiver comprising at least one processing device that is operable to execute a substantial portion of Physical (PHY) layer operations and a substantial portion of Media Access Control (MAC) layer operation of the system, the at least one processing device performing the PHY layer operations to receive an analog signal corresponding to a data block, to sample the analog signal to produce samples, to equalize the samples, and to produce soft decision bits of the data block and intervening between the PHY layer operations and

the MAC layer operations to determine that IR operations are required for the soft decision bits of the data block, and to initiate IR operations; and an IR processing module operably coupled to the at least one processing device that is operable to received the soft decision bits of the data block, to receive a direction from the at least one processing module to perform IR operation on the soft decision bits of the data block, and to perform IR operations on the soft decision bits of the data block; and a method for performing Incremental Redundancy (IR) operations in a wireless receiver comprising by at least one processing device that is operable to execute a substantial portion of Physical (PHY) layer operations and a substantial portion of Media Access Control (MAC) layer operations of the wireless receiver performing PHY layer operations including receiving an analog signal corresponding to a data block, sampling the analog signal to produce samples, and equalizing the samples to produce soft decision bits of the data block, intervening between the PHY layer operations and the MAC layer operations to determine that IR operations are required for the soft decision bits of the data block, and transferring the soft decisions of the data block to an IR processing module with a direction to perform IR operations on the soft decisions of the data block; and the IR processing module receiving the soft decision bits of the data block and performing IR operations on the soft decision bits of the data block in an attempt to correctly decode the data block, as the applicant has claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

Art Unit: 2611

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is (571) 272-3119. The examiner can normally be reached on Monday-Friday 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Juan Alberto Torres
10-23-2006


TENZIN GHEBRE-MARIAM
PRIMARY EXAMINER